

Wireless E9-1-1

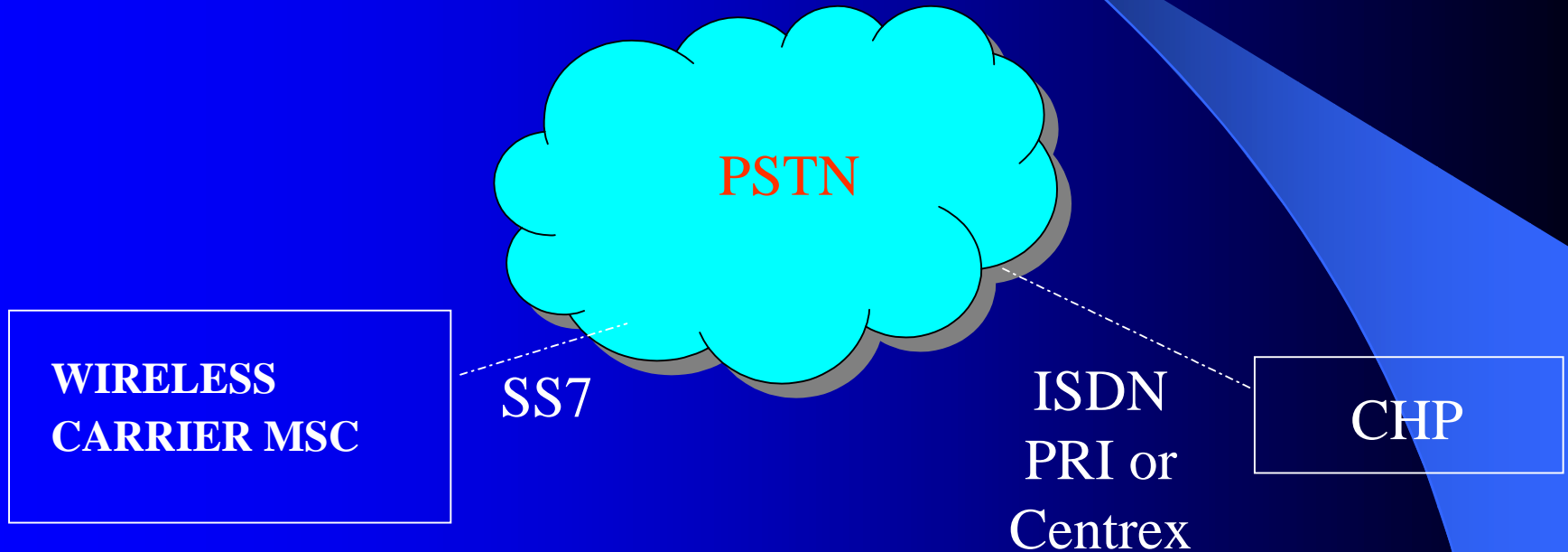
The California Plan

APCO 5/4/01

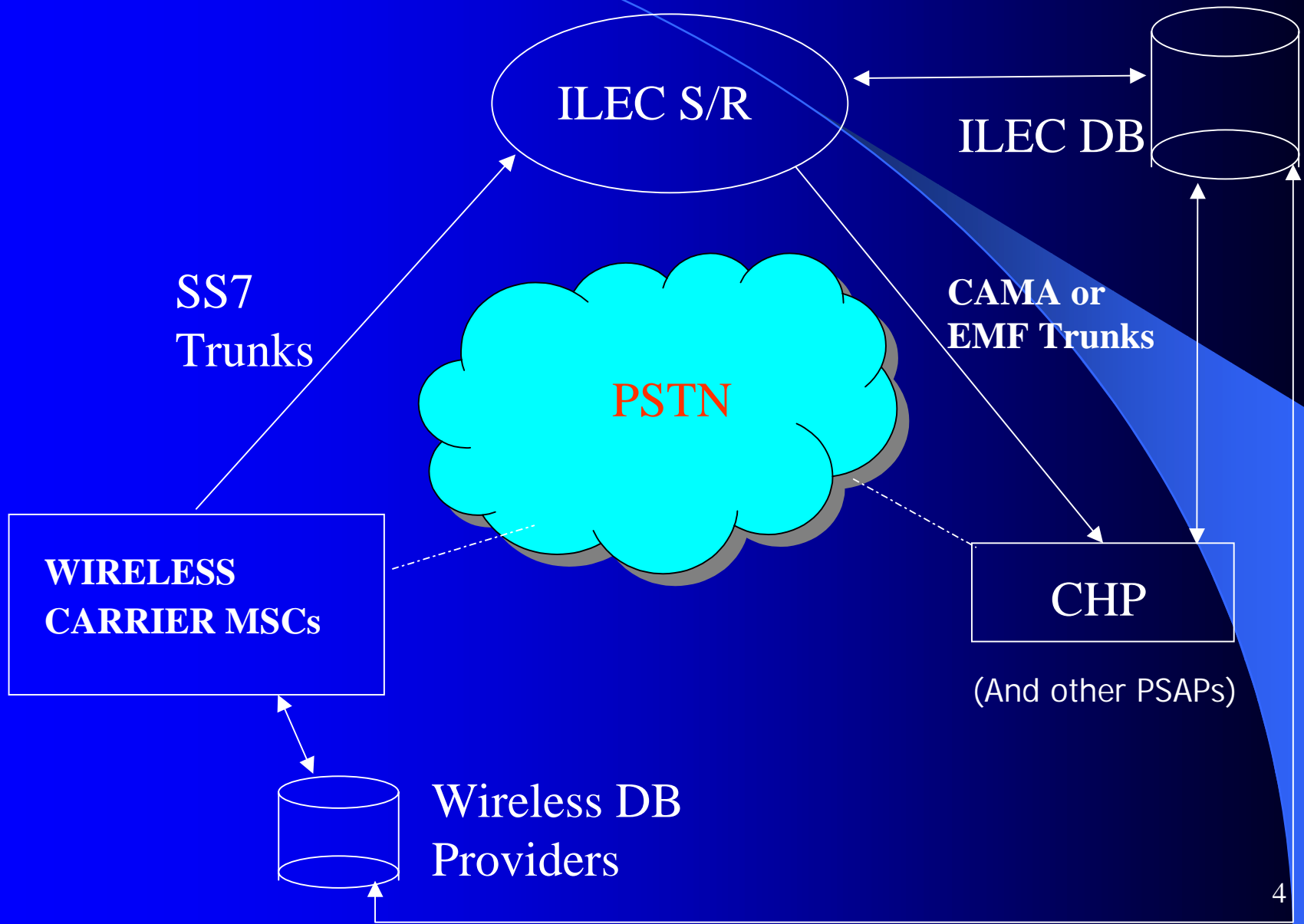
Wireless E9-1-1 Facts

- **CHP receives approximately 6 million wireless 9-1-1 calls annually.**
- **Minimal Wire-line E9-1-1 Connectivity (where needed most).**
 - **Wireless Service Providers (WSPs)**
 - **CHP PSAPs (Los Angeles the exception)**
- **Local PSAPs are connected!**
- **All WSPs using wire-line system.**

WIRELESS 9-1-1 TODAY



Wireless E9-1-1 Network (Proposed)



Wireless E9-1-1 Network Configuration

- **WSPs to connect to only one S/R per MSC (closest appropriate) Selective Router**
 - Connectivity based on P.01 Grade of Service
- **Databases to be integrated.**
 - ILEC databases (Lucent's ALISA)
 - WSP databases (SCC & XYPOINT)
- **PSTN to be used for default routing to CHP.**

Wireless E9-1-1 Implementation Plan

- **Regional Implementations**
 - Los Angeles County Pilot (begins in 4Q/01)
 - Multi-year project (2001 – 2005)
 - PSAP/network readiness being considered
- **Four-Level Plan**
 - Service level determined by ILEC and WSP capabilities in region.
- **State 9-1-1 and PSAPs to partner to request service from WSPs**
 - Learn as we go and be flexible.

Four Levels of Service

- All levels satisfy both phases of FCC 94-102.
- Graduated Progressive Approach
 - To start with highest most appropriate level.
 - Fits California Law (per AB 1263)
- Levels 1 & 2 – All Wireless 9-1-1 calls will continue to direct route to CHP.
- Levels 3 & 4 - Calls direct-routed to other PSAPs
 - Level 3 - Sector-Based routing (where applicable)
 - Level 4 - X/Y routing (Timing is the key)

Wireless E9-1-1 Prerequisites

- **Connect WSPs to E9-1-1 network.**
- **Connect CHP to E9-1-1 network.**
- **Equip CHP PSAPs with E9-1-1 CPE**
- **Equip CHP and other PSAPs with appropriate Phase I & II functionality.**
 - **Wireless ALI record format being developed for all.**
 - **Large PSAPs should acquire GIS functionality on CAD or IWS.**

Wireless E9-1-1 Level One Service

- **All calls continue to route to the CHP.**
- **CHP to receive the Phase I (callback number, cell sector descriptor) and Phase II (x, y coordinates, if available).**
- **Minimal “telldale” information, such as the CHP Area Office can be provided.**
- **Transfers to other agencies done via PSTN.**

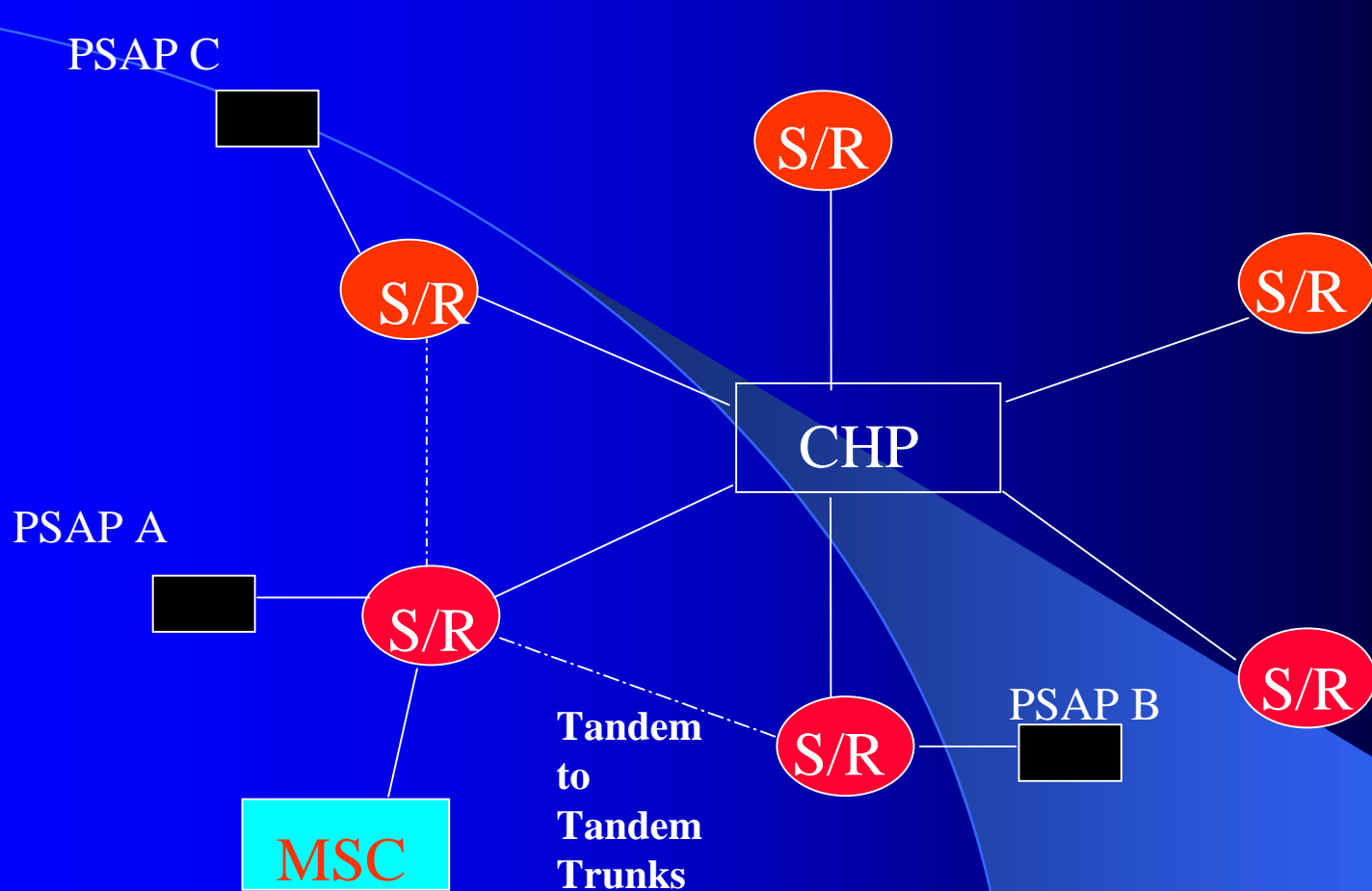
Level One Service

- **CHP to receive Wireless ALI record (formatted with ANI, cell sector descriptor, x/y coordinates, & teltales)**
- **CHP to receive x/y coordinates when WSPs deliver it (to start October, 2001)**
- **CHP to trunk to appropriate S/Rs (LACC already connected to all 6 LA County S/Rs)**

Level Two Service

- Adds to “Level One,” Selective Router “911 tandem” interconnectivity:
 - Provides for Enhanced Transfers to other PSAPs
 - PSAPs receiving transfers from the CHP will get the Wireless ALI record with the callback number, cell sector descriptor, XY coordinate (if available) and teltales. Details to be determined.
 - XY will display on call taker’s screen in mapped format - if PSAP has appropriate GIS functionality.
 - Also benefits wire-line 9-1-1 transfers

Level 2 Network Drawing



Level Three Service

- Adds Selective Routing Based on Cell Sector to most appropriate PSAP.
- AKA Phase I routing. Same as today, only to all primary PSAPs.
- Minimal applicability in some areas.
- Implementations of Level Three may depend on Level Four Feasibility and Timing.

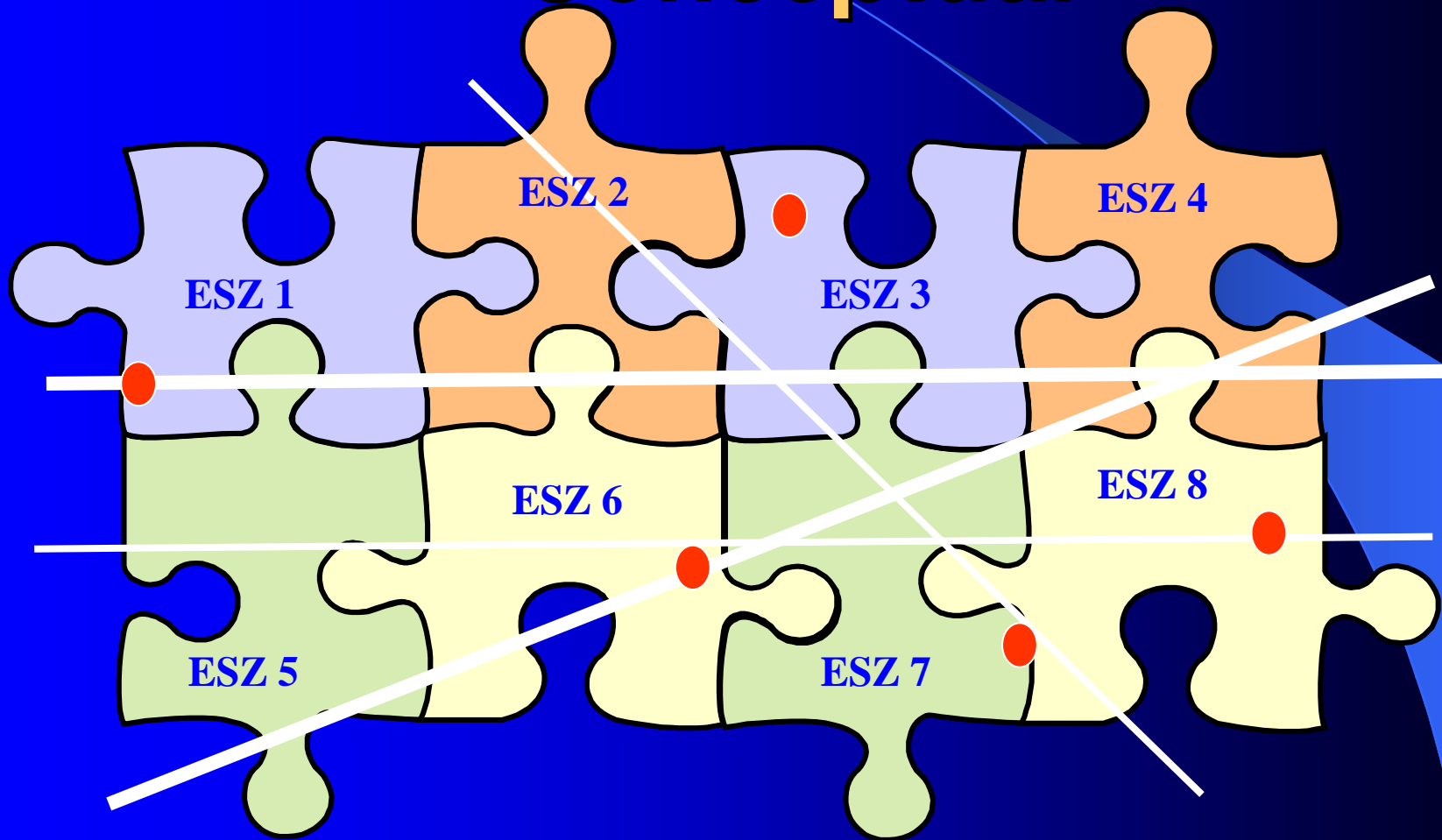
Level Three (continued)

- **Should relieve the load on CHP**
- **Applicability of Level 3 will depend on:**
 - **Cellular Network Designs - How many candidate cell sectors are in an area**
 - **AB 1263 says that cell sectors that cover a CHP area are to be routed to CHP**
 - **How close we are to Level Four**

Level Four Service

- **Adds Wireless 9-1-1 Call Routing Based on XY coordinates (50 – 100 meter accuracy).**
- **Adds Telltale Information so that PSAPs can selectively transfer calls to other “linked” PSAPs.**
- **Viability of XY routing not yet known. Will depend on network timing and WSP offerings.**
- **Requires the creation of a new GIS coordinate routing database for both CHP and Local jurisdictions.**

Level Four Routing Conceptual



Freeways are CHP ESZs

● (X, Y) Wireless Callers

In Summary

- Level Four Bound
- State to remain flexible.
 - Will learn from successes and failures in Los Angeles and apply to remainder of state!
- Track Wireless E9-1-1 Progress at www.telecom.ca.gov. Click on “Services” and “9-1-1 Program”
- Questions Please! Thank You, John Marengo